IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re patent application of

F. Muir

Serial No. 10/807,411

Filed March 24, 2004

Confirmation No. 3860

Group Art Unit 1732

Examiner Daniels

For BOTTLE CAP WITH BUILT-IN MAGNIFICATION

Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

APPELLANT'S AMENDED BRIEF UNDER 37 C.F.R. §41.37

A Notice of Non-Compliant Appeal Brief was issued in this case on December 27, 2006. The reason for the notice appears to be in error as it states that the "brief does not contain the name of the real party in interest in section 1". In section 1 of the of the brief filed November 26, 2006, the brief states that the reap party in interest in the appeal is "the party named in the caption of this brief", which is, of course, Frank Muir (see above). To address this notice, the undersigned requests entry of this amended brief, which now states the party by name in section 1.

This brief is in furtherance of the Notice of Appeal, filed in this case on October 6, 2006.

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This brief contains these items under the following headings, and in the order set forth below (37 C.F.R. §41.37(c)):

I. REAL PARTY IN INTEREST

The real party in interest in the appeal is:

☑ Frank Muir who is the party named in the caption of this brief

☐ the following party:

II. RELATED APPEALS AND INTERFERENCES

With respect to other appeals, interferences or judicial proceedings that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal:

☑ there are no related appeals, interferences or judicial proceedings related to, which directly affect or may be directly affected by or have a bearing on the Board's decision in this pending Appeal.

☐ these are as follows:

III. STATUS OF CLAIMS

The status of the claims in this application are:

A. Total number of claims in Application

Claims in the application are: Claims 1-4, 7-11, and 17-18

B. Status of all the claims:

1. Claims cancelled: 5, 6, and 12-16
2. Claims withdrawn from consideration but not cancelled: none
3. Claims pending: 1-4, 7-11, and 17-18
4. Claims allowed: none
5. Claims rejected: Claims 1-4, 7-11, and 17-18

C. Claims on Appeal.

The claims on appeal are: Claims 1-4, 7-11, and 17-18

IV. STATUS OF AMENDMENTS

The status of amendments filed subsequent to the final rejection are as follows: An amendment under 37 C.F.R. §1.116 filed August 16, 2006, has been entered for purposes of appeal. See Advisory Action mailed August 29, 2006.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention as defined in the claims on appeal is directed to a method of making bottle caps with a built-in magnification lens, and where the methodology accommodates for making bottle caps which are of different diameters so as to fit on different diameter bottles (e.g. pill bottles). For exemplary purposes, Figure 1 shows a bottle cap 112 on a medicine bottle 100, and Figure 3 illustrates use of the magnification feature on the bottle cap to enlarge the directions imprinted on the side of a bottle. Also, for exemplary purposes, Figure 2 shows a bottle cap 212 on a medicine bottle 200. The medicine bottles shown in Figures 1 and 2 are of different diameters (in addition to Figures 1 and 2; see the application at page 5, lines 5-6).

According to the invention, the radius of curvature of the lens should vary depending on whether it is a smaller or a larger diameter. As explained on page 8 of the application, at lines 15 et seq., "The radius of curvature...is based on the diameter of the bottle cap, having a focal length that is preferably a minimum distance of one and a half times the height of the bottle". Figures 4 and 5 illustrate the radius of curvature ∠a and ∠b varying depending on the diameter of the bottle 400 or 500 to which the bottle cap is to be affixed.

Figures 6a, 6b, and 6c of the patent application show alternative configurations of bottle engaging portions of the bottle caps produced according to the claimed method. Specifically, Figure 6a shows an inwardly projecting hook structure (614a), while Figures 6b and 6c respectively show inner and outer thread configurations (614b and 614c, respectively) (see the paragraph bridging pages 7 and 8 of the application).

Figure 11 of the patent application shows an embodiment where the top surface of the cap 1113a is flat. The convex lens 1113b extends downward into the pill bottle. This configuration can provide assistance in stacking pill bottles with attached bottle caps on top of one another. Figure 11 also highlights that the top and bottom of the bottle cap can have different radiuses of curvature (e.g., flat versus

curved, but it will be understood that a surface that is not flat can also be used----see also Figure 5 where the top is curved more than the bottom).

As explained on page 8 of the patent application, at lines 7 et seq., the bottle cap can be transparent or translucent in character, and may have opaque portions. Magnification is the important feature, and it should be noted that the stamping process could be used to convert a mostly translucent member into a mostly transparent section where the lens is situated.

Furthermore, page 8 of the application at lines 18 et seq. describes stamping the bottle caps from a single piece of plastic (i.e., the lens and the bottle engaging portions are formed of the same material), as well as the possibility of forming the lens and the bottle engaging members in the same stamping procedure.

As explained above, the invention provides a methodology whereby bottle caps, each with a built in magnification lens, are produced for installation on bottles having different diameters. Claim 1 requires

selecting a radius of curvature for at least one of an upper or lower convex surface of a top portion of each bottle cap of a plurality of bottle caps wherein different radiuses are selected for different diameter bottle caps of said plurality of bottle caps.

As noted above, Figures 4 and 5 show different diameter bottle caps 412 and 512 having different radiuses of curvature (∠a and ∠b) . Pager 7 of the application, at lines 22-25, it is explained that by determining the lens' radial curvature based on the bottle cap diameter, different levels of magnification can be achieved.

Claim 1 also requires

for each bottle cap to be made, pressing a single piece of plastic that is in the shape of a bottle cap, or will be formed into the shape of a bottle cap, having said top portion and an annular bottle engaging portion which includes either thread engaging members or a lid wall with an inwardly projecting hook region at its base for selectively affixing the bottle cap to a top of a bottle, wherein said at least one of said upper or lower convex surfaces of said top portion of each bottle cap of said plurality

of bottle caps to be made has said radius of curvature selected in said selecting step so as to provide optical magnification of objects viewed through said top portion.

As noted above, Figure 3 of the application shows optical magnification being performed through the top portion of the lense. Figures 6a, 6b, and 6c respectively show a hook engaging portion 614a, an inner thread engaging portion 614b, or an outer thread engaging portion 614c. Page 8 of the application at line 13 explains that the bottle cap is formed from a single piece of plastic (i.e., in the invented method, a lens is not inserted into a bottle engaging member–rather, the lens is formed right in the bottle cap itself).

With respect to claim 2, page 8, line 22 discusses the use of a stamping process.

With respect to claims 3 and 4, Figures 6a, 6b, and 6c show use of hook engaging members 614a and thread engaging members 614b and 614c.

With respect to claims 7 and 8, Figure 4 of the application shows a top 413a with the same curvature as the bottom 413b, while Figure 5 (and Figure 11) of the application shows a top 513a with a different radius of curvature than the bottom 513b.

With respect to claim 9, Figure 11 shows a variation of the invention where the top 1113a is flat and the bottom 1113b is curved.

With respect to claims 10 and 11, page 8 of the application, at line 7 describes both translucent and transparent configurations.

With respect to claim 17, Figures 1, 2, 3, 4, 5, 6a-c, and 11 each show a bottle cap which has the convex surfaces extend to an edge of the bottle engaging portion.

With respect to claim 18, page 8 of the application at lines 20-23 describes a stamping procedure for simultaneously forming both the lens and the bottle engaging portion.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal is the rejection of claims 1-3, 7-11, and 18 under 35 U.S.C. §103(a) as being unpatentable over Owens (U.S. Patent 2,635,289); the rejection of claim 4 under 35 U.S.C. §103(a) as being unpatentable over Owens (U.S. Patent 2,635,289) in view of Towns (U.S. Patent 2,669,369); and the rejection of claim 17 under 35 U.S.C. §103 (a) as being unpatentable over Owens (U.S. Patent 2,635,289) in view of Harris (U.S. Patent 4,401,434). In the advisory action of August 29, 2006, the rejection under 35 U.S.C. 112, second paragraph, was withdrawn.

ARGUMENT VIIA. REJECTIONS UNDER 35 U.S.C. §112, FIRST PARAGRAPH

There are no rejections under 35 U.S.C. §112, first paragraph.

ARGUMENT VIIB. REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH

There are no rejections under 35 U.S.C. §112, second paragraph.

ARGUMENT VIIC. REJECTIONS UNDER 35 U.S.C. §102

There are no rejections under 35 U.S.C. §102.

ARGUMENT VIID. REJECTIONS UNDER 35 U.S.C. §103

As one should recognize when he or she goes to a pharmacy, different prescriptions are often filled in different sized bottles. This may have something to do with the number of pills being provided; the shape of the pills (round versus lozenge versus caplet; or the requirements of the manufacturer of the pharmaceutical). Furthermore, most pill bottles dispensed from a pharmacy include directions for use imprinted on the side of the bottle (see Figure 3 of the application). Depending on a variety of factors including the eyesight of the person who will be taking the prescription, the font size used for imprinting the dosing instructions, and the diameter of the bottle, the instructions may be difficult to read. It would be useful to have a built in magnification feature to allow the user to read the instructions. The cap is an ideal location to include a magnification lens.

However, because the cap size varies due to differences in the diameters of the pill bottles, a one-size fits all approach to providing the magnifying lens will not work. That is, if the magnification lens was only one size, it may be too large to fit onto the top of some pill bottles, and it may be too small for others.

Furthermore, as one should recognize, the radius of curvature affects the magnification capability of a lens. Hence, care must be taken in fixing the radius of curvature of a lens used to magnify instructions on the side of a pill bottle, otherwise the lens itself will make the instructions out of focus. Given this problem, and given the need to accommodate a wide variety of pill bottles, the inventor has recognized that a methodology for producing bottle caps for bill bottles (or other containers), that considers the diameters of the bottles so that an appropriate radius of curvature for the lens can be selected will provide significant advantages in the mass production of bottle caps with built in lenses.

As shown in Figures 4 and 5 of the patent application, a smaller diameter bottle cap should have a different radius of curvature than a larger diameter bottle cap. As shown in Figures 4 and 5, $\angle a$ is greater than $\angle b$. This will allow bottle caps used

on smaller diameter bottles to have greater magnification (see page 7 of the application at line 25). If the same radius of curvature were used on the bottle cap of Figure 5 as was used on the bottle cap of Figure 4, the instructions on the side of the bottle 500 of Figure 5 would be out of focus.

Prior to the invention by the applicant, there existed no process for allowing the mass production of bottle caps with built in lenses, where the process accommodated different diameter bottles and bottle caps.

With regard to the principal reference to Owens it should be immediately clear that this reference has nothing to do with bottle caps. Rather, this reference is directed to the production of optical and other precision elements (see Title). The Examiner has focused is attention on the ability to form a convex surface in a plastic material to create a lens in his analysis of Owens. The applicant; however, has not claimed simply forming a lens from a plastic material. Rather, the applicant has invented and claimed a process for making bottle caps (in Owens bottle caps are not made), each having a built in magnification feature, where the process includes both the steps of selecting a radius of curvature for at least one of an upper or lower convex surface of a top portion of each bottle cap...wherein different radiuses are selected for different diameter bottle caps, and, for each bottle cap, pressing a single pieace of plastic that is in the shape of bottle cap...having a top portion and an annular bottle engaging portion...[where the bottle caps] provide optical magnification of objects through the top portion...[and where the bottle engaging portion] includes either thread engaging members or a lid wall with an inwardly projecting hook.

In contrast to the present invention, Owens shows manufacturing optical instruments. With regard to Figures 29 and 30 of Owens, it can be seen in one embodiment of Owens that the lens can be threaded into an optical instrument (not affixed to a bottle).

Most importantly, however, in Owens there is absolutely no discussion whatsoever concerning selecting a radius of curvature for at least one of an upper or lower convex surface of a top portion of each bottle cap...wherein different radiuses

are selected for different diameter bottle caps. While the instruments being manufactured according to the Owens procedure will have a lens with a radius of curvature, Owens makes no suggestion of having different radiuses of curvature as is will be needed when different diameter bottle caps are used. Rather, with Owens, the lens will have one radius of curvature and will be used for one instrument.

Owens does not show or suggest a process that will allow the mass production of anything similar to bottle caps, and does not show or suggest a process that will permit accommodating different sized products in the process. That is, at no point in Owens is there ever any discussion about having two lenses for two different, but similar objects, having different radiuses of curvature. Thus, the step of selecting a radius of curvature...wherein different radiuses are selected for different diameter bottle caps would simply not be obvious to one of ordinary skill in the art from a review of Owens.

In view of the above, claim 1 and all of its dependent claims should be considered new and unobvious over Owens.

Claim 18 would be separately patentable over claim 1 as it contemplates a process where the pressing simultaneously forms the annular bottle engaging portion and said top portion having said at least one upper or lower convex surface. With reference to Figures 29 and 30 of Owens and the related text, it is clear that the outer threads are not formed in the same process as the curved lens feature.

Claim 11 would be separately patentable over claim 1. Owens at no point shows or suggests a translucent material. Rather, all materials discussed in Owens are transparent.

With respect to claim 4, it is argued that one of ordinary skill in the art would not combine a re-sealing bottle cap with an optical instrument. That is, Owens cannot properly be combined with Towns as the Examiner has suggested. Furthermore, the Towns device does not show or suggest inclusion of a magnifying lens feature. This would not be included in Towns, as the Towns device is used on soda bottles and is predominately concerned with eliminating the dissipation of carbonation. Thus, there

would be no motivation to combine the optics features of Owens and the re-sealing features of Towns. Therefore, claim 4 would not be obvious to one of ordinary skill in the art to a combination of Owens and Towns.

With respect to claim 17, it is argued that one of ordinary skill in the art would not combine features of a splinter removing kit (Harris) with features of a precision optical instrument (Owens). Furthermore, Harris discloses something altogether different from the invention in that the lens 64 is clearly a separate component from the cap 16. In contrast, the invention requires that the lens is part of a single piece of plastic (claim 1). As such, Harris teaches away from the claimed invention and would not be used to modify Owens.. Therefore, claim 17 would not be obvious over a combination of Owens and Harris.

ARGUMENT VIIE. REJECTION OTHER THAN 35 U.S.C. §§102, 103 AND 112

There are no rejections other than the rejection under 35 U.S.C. §103, discussed above.

VIII. CLAIMS APPENDIX

The text of the claims involved in the appeal are:

1. A method of making bottle caps, each having a built-in magnification feature, comprising the steps of:

selecting a radius of curvature for at least one of an upper or lower convex surface of a top portion of each bottle cap of a plurality of bottle caps wherein different radiuses are selected for different diameter bottle caps of said plurality of bottle caps; and

for each bottle cap to be made, pressing a single piece of plastic that is in the shape of a bottle cap, or will be formed into the shape of a bottle cap, having said top portion and an annular bottle engaging portion which includes either thread engaging members or a lid wall with an inwardly projecting hook region at its base for selectively affixing the bottle cap to a top of a bottle, wherein said at least one of said upper or lower convex surfaces of said top portion of each bottle cap of said plurality of bottle caps to be made has said radius of curvature selected in said selecting step so as to provide optical magnification of objects viewed through said top portion.

2. The method of claim 1 wherein said pressing step is achieved using a stamping machine.

3. The method of claim 1 wherein said annular bottle engaging portion includes thread engaging members.

4. The method of claim 1 wherein said annular bottle engaging portion includes a lid wall with an inwardly projecting hook region at its base.

7. The method of claim 1 wherein said top portion of each bottle cap to be formed

has both a convex upper surface and a convex lower surface each of which has an equal radius of curvature.

8. The method of claim 1 wherein said top portion of each bottle cap to be formed has both a convex upper surface and a convex lower surface each of which has a different radii of curvature.

9. The method of claim 1 wherein at least one surface of said top portion is flat.

10. The method of claim 1 wherein said single piece of plastic is transparent.

11. The method of claim 1 wherein said single piece of plastic is translucent.

17. The method of claim 1 wherein said at least one of said upper or lower convex surfaces has a perimeter which extends to an edge of said annular bottle engaging portion.

18. The method of claim 1 wherein said step of pressing simultaneously forms the annular bottle engaging portion and said top portion having said at least one upper or lower convex surface.

IX. EVIDENCE APPENDIX

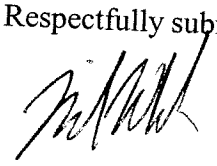
There is no additional evidence on which Applicants rely in this Appeal.

X. RELATED PROCEEDINGS APPENDIX

There are no related proceedings involving this application.

The Commissioner is authorized to charge attorney's deposit account 50-2041 for the fee for entry and consideration of this appeal brief.

Respectfully submitted,



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